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## TRANSMITTAL LETTER

In re Application of  
HANS WESTMIJZE et al.

Serial No: 09/889,436

Filing Date: October 13, 2001

Title: AQUEOUS PEROXIDE EMULSIONS

Mail Stop Appeal Brief - Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

: Docket No: ACD 2665 US  
:  
: Examiner: M. L. Reddick  
:  
: Group Art Unit: 1713  
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### **CERTIFICATE OF MAILING**

I hereby certify that this correspondence is being deposited with the United States Postal Service as First-Class mail in an envelope addressed to: Mail Stop Appeal Brief - Patents, Commissioner for Patents, PO Box 1450, Alexandria, VA 22313-1450

on February 21, 2005  
Vickie Purcell  
Vickie Purcell

Sir:

☒ Transmitted herewith is a responsive document(s) for this application.  
TRANSMITTAL LETTER IN DUPLICATE; REPLY BRIEF IN TRIPLICATE; POST CARD; and CERTIFICATE OF MAILING.

☐ Applicant hereby petitions for an extension of time under 37 CFR 1.136 of:

☐ One Month (\$ 120.00)  
☐ Three Months (\$1020.00)

☐ Two Months (\$ 450.00)  
☐ Four Months (\$1590.00)

The total fee believed due is \$ 0.00. Please charge this amount and any other fees which may be due (including filing fees under 37 CFR 1.16 and processing fees under 37 CFR 1.17) to Deposit Account No. 01-1350. If an extension of time is required but has not been requested above, Applicant hereby petitions for an extension of time sufficient for the attached document(s) to be timely. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

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Patent

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

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**BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES  
REPLY BRIEF TO EXAMINER'S ANSWER**

The instant claims were rejected under 35 USC §103 for obviousness in view of EP '712 in combination with either one of WO '835, Lundin '250 or Lundin '481. However, even if the teachings of the references were combined the present invention would not be obtained. Page 9, first paragraph of WO '835 discloses an emulsifying system containing fatty alcohol ethoxylates or ethoxylated fatty acid. Thus the ethoxylated fatty acid of the emulsifying system of WO '835 is not one of the constituents of the system, but it is the entire system.

Appellant agrees with the Examiner's analysis of EP '712. This patent application discloses an emulsifier system which does not contain ethoxylated fatty acid, but a copolymer of polyalkylene oxide and a polysiloxane instead.

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However, it is the presence of the ethoxylated fatty acid rather than the copolymer of polyalkylene oxide and a polysiloxane that provides the advantageous properties of the emulsifier system of the present invention with regard to safety and tolerance towards anti-freeze agent.

Thus, a combination of the teachings of EP '712 and WO '835 would replace the emulsifying system of EP '712 by that of WO '835, thereby arriving at a composition having the ethoxylated fatty acid as the only emulsifier. Such composition is not claimed by the present invention. The Examiner has therefore not even stated a *prima facie* case for obviousness.

Nevertheless, for the sake of argument, Appellant is happy to assume the burden of establishing the lack of justification of the combining of references attempted by the Examiner. The proper inquiry with regard to combining references is whether there is something in the prior art as a whole to suggest the desirability, and thus the obviousness, of making the combination urged by the Examiner (*In re Fulton*, 73 USPQ2d 1141, CAFC, 2004). In view of the following discussion, there is nothing that so suggests such desirability.

The essential question is whether WO '835, Lundin '250 or Lundin '481 provide any guidance to the person of ordinary skill to replace the copolymer of polyalkylene oxide and a polysiloxane for an ethoxylated fatty acid in the emulsifying system of EP '712.

WO '835 makes use of an emulsifying system, but for stabilizing a suspension rather than an emulsion. A suspension is a liquid containing very small solid particles that remain suspended (i.e. are floating) in the liquid, as opposed to an emulsion which consists of small liquid droplets that are suspended into another liquid. It should be clear that, physically, these systems are completely different.

In suspensions (solid/liquid dispersions) electrostatic, steric and electrosteric forces play an important role in suspension stabilization to prevent settling of solid particles from the suspensions, whereas in emulsions (liquid/liquid dispersions) emulsifiers are used to control the stability of emulsions against creaming/ sedimentation, flocculation, Ostwald ripening, coalescence and phase inversion.

It is also clear that there is no sound reason to believe that systems that are suitable for keeping solid particles free floating in a liquid would also be suitable for keeping liquids free floating in another liquid. Note, for instance, that emulsions will coalesce over time (Ostwald ripening), whereas suspensions will not. Such physical differences indicate a requirement of different stabilization systems, and, thus, a disincentive for one of ordinary skill in the art to combine the teachings of EP '712 and WO '835.

The knowledge to maintain the alpha-olefin copolymer ester ethoxylate constituent and to replace only part of the emulsifying system of EP '712, i.e. only the copolymer of polyalkylene oxide and a polysiloxane by an emulsifier that has been disclosed in WO '835 to be complete as such, is a step that cannot be obvious and could only be done when knowing the instant invention and using it as a guideline. Such an exercise in hindsight is impermissible.

Since Lundin '250 and Lundin '481 in this respect have a similar disclosure as WO '835 the above arguments equally apply to these references. Furthermore the Lundin references disclose the use of many emulsifiers selected from the groups consisting of ethoxylated alkylphenols, ethoxylated fatty alcohols, ethoxylated fatty acids, ethoxylated glycol- and glycerol-fatty esters, alkylene oxide block-copolymers, and mixtures thereof. The presently claimed mixture can therefore never be derived from Lundin '250, since there is no incentive to select specifically ethoxylated fatty acids from these possibilities. Also in Lundin '481 the emulsifiers are suitably selected from the groups consisting of ethoxylated alkylphenols, ethoxylated fatty alcohols, ethoxylated

glycol- and glycerol-fatty esters, alkylene oxide block-copolymers, and mixtures thereof. For the above reasons, the instant mixture cannot be derived from Lundin '481, and there is no incentive to specifically select ethoxylated fatty acids from these emulsifiers and to replace one of the emulsifiers of EP'712, i.e. only the siloxane copolymer, for this fatty acid, and to maintain the other constituent.

The system of the Lundin references may contain polyvinyl alcohols (PVAs), as mentioned by the Examiner. However, the PVAs of those references are added as thickening agents and these agents are not emulsifiers. PVAs are typically only added to prevent phase separation.

Furthermore, It is important to note that PVAs are chemically unrelated to alpha-olefin copolymer ester ethoxylates, which are commercially available, for example, under the trade mark Dapral® GE202. The PVAs of WO '835, Lundin '250 and Lundin '481 are chemically as well as functionally different from the alpha-olefin copolymer ester ethoxylate of EP '712 and do not act as emulsifiers. The Examiner's remarks regarding PVAs are therefore without merit.

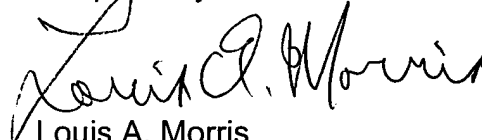
As regards page 3, lines 33-36 of EP '712, the expression "and/or" is clearly a mistake. The further specification and the claims are unambiguous in that there is no case of two alternatives, but the system is only described having two different constituents.

With regard to the "consisting essentially of" transition clause, this language absolutely excludes polyether siloxane, since it is unambiguous, in view of EP '712, that such compound is an emulsifier, thus materially affecting the characteristics of the composition. Polyvinyl alcohol (PVA), on the other hand, is not excluded, since PVA is not an emulsifier but an additional component not materially affecting the emulsifying properties, but only the thickening properties.

Satomi mentions a long list of emulsifiers, i.e. alkylamine hydrochlorides, alkyltrimethyl ammonium chlorides, alkyl dimethylbenzyl ammonium chlorides, polyoxyethylene alkyl amines, fatty acid esters of mono-, di-, and tri-sucrose such as sucrose ester of laurylic acid, sucrose ester of palmitic acid, sucrose ester of stearic acid, and sucrose ester of oleic acid, fatty acid esters of mono- and di-sorbitans such as sorbitan ester of lauric acid, sorbitan ester of oleic acid, and sorbitan ester of palmitic acid, glycerin fatty acid ester, propyleneglycol fatty acid ester, polyoxyethylene alkyl ethers, polyoxyethylene alkylphenyl ether, polyoxyethylene polyoxypropylene block polymer, polyoxyethylene sorbitan fatty acid ester, polyoxyethyleneglycerin fatty acid ester, and polyethyleneglycol fatty acid ester. The selection of the emulsifiers of the present invention from that list can be accomplished only through an impermissible exercise in hindsight.

In conclusion, the prior art does not render the present invention obvious under 35 USC § 103. It is respectfully requested of this Honourable Board, that the Examiner's rejection of the instant claims be reversed.

Respectfully submitted,



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